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ABSTRACT

A study was conducted to investigate the relationship between student participation in classroom discussion and the way these students rate their instructors. The general hypothesis of this research was that student participation in classroom discussion is rewarding and that it reinforces favorable attitudes toward the instructor. A total of 480 undergraduates rated their instructors. These 18 instructors identified high and low participants, and instructors were rated as high and low facilitators of discussion by expert observers. No difference in teacher ratings between high and low participants was found, but instructors who were rated as high facilitators by experts were also rated higher by students. (Author/KM)

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The Relationship Between Students Ratings of Instructors and Their Participation in Classroom Discussion

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The last few decades have witnessed substantial new efforts to improve the evaluation of college teaching (Costin, et. al., 1971). This renewed effort is probably due first to the awakening of student movements and student involvement in campus policy making, and secondly, the new concern regarding the nature and relevance of events in the classroom. However, the specific relationship between classroom activities, on the one hand, and the evaluation of instructors on the other hand, has not been studied systematically.

The purpose of this study is to investigate this relationship. Specifically this study will investigate the relationship between student participation in classroom discussion and the way they rate their instructors. Participation will be defined quantitatively in terms of the amount of student talk in the classroom. Student talk will be defined as either voluntarily initiating some kind of talk or answering questions the instructor asks.

Participation in classroom discussion is a rewarding experience and it generates favorable attitudes toward the instructor, the facilitator of participation. Thus students who frequently participate in classroom discussion are expected to rate their instructors higher than students who are infrequent participants. Similarly, the instructors who provide for

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student participation are expected to be rated higher than those instructors who provide less participation.

The research which has been done in this area seems to provide evidence that participation is reinforcing. Kelley (1949) found that the frequency of students classroom participation was significantly greater for students who perceived their instructors as warm and friendly than students who perceived their instructors as cold and unfriendly. Johnson (1964) found that students who received more social verbal reinforcements displayed greater frequency of verbal participation than students who did not receive such reinforcement. Tuckman (1969) reported that students were more satisfied with courses that were taught in a non-directive manner in which there was also more discussion and assigned higher ratings to non-directive teachers. Similar findings were obtained earlier by Flanders (1963). Flanders concluded from his studies in the United States and New Zealand that teachers who used indirect teaching procedures which involved much student participation produced greater student achievement and more desirable attitudes toward school than teachers who used more direct methods.

Three hypotheses were tested in this research:

(1) Students who are nominated by instructors as frequent participants in classroom discussion will rate their instructors higher than those who are nominated as non-participants;

(2) Instructors who are more indirect in their teaching style will be rated higher than those who are direct in their teaching style; and

(3) Classes which have more frequent participation on the average as indicated by the amount of student

talk will rate their instructors higher than those classes which have less frequent participation.

Methods

Subjects

Eighteen instructors, twelve males and six females, and 488 undergraduate students enrolled in eight educational psychology classes, eight general psychology classes, and two sociology classes were the subjects. They were taught by five professors and fourteen graduate and teaching assistants. Approximately one third of the students were males and two thirds females. Students ranged from freshman to seniors in college. The number of students in classes ranged from 18 to 44 with a mean of 27.3.

Procedures

All classes involved in this study were visited three times. The first two visits were used to observe and record student-teacher interactions while regular classroom activities were proceeding. Two trained observers recorded student and teacher verbal behaviors in classrooms utilizing the Flanders Interaction Analysis Categories (FIAC; Flanders, 1963). Inter-rater reliability was .85. The FIAC is particularly relevant for the purposes of this study because it can be used to identify instructors who are direct and indirect in their teaching styles by utilizing the indirect/direct ratio of teacher talk (I/D ratio). The FIAC can also be used to identify classes that are high and low in student participation by utilizing the student talk categories. In the third visit, the first ten items of the Purdue Rating Scale for Instruction (PRSI; Remmers, 1960) were administered.

On a separate occasion the instructors were asked to nominate the ten students who participate the most in classroom discussion and the ten students who participate the least. Reliable teacher nominations of students with regard to some ability or characteristic are difficult to obtain. In order to insure greater reliability for these nominations, teachers were provided with a detailed description of what constituted participation and were asked to rely upon the description as a criterion in identifying the students.

Two 2 x 2 analyses of variance were used to test the first two hypotheses and a t test to test the third hypothesis. In the first analysis students were divided into high and low participants as they were nominated by their instructors and were further divided by sex. In the second analysis the instructor ratings by male and female students of direct and indirect instructors were studied. The third analysis concerned the differences in the ratings of instructors of classes high and low in participation according to amount of student participation.

Results

Participation in classroom discussion and sex of the students served as the two independent variables in the analysis for testing the first hypotheses and student scores on the first ten items of the PRSI served as the dependent variables. Individual ratings of students were the units of analysis and alpha was set at .05. The analyses of variance are reported in Table 1. The main effect of participation was not significant for any of the dependent variables. The main effect of sex was significant for three dependent variables: Sense of proportion and humor, Personal appearance, and Stimulating Intellectual curiosity. For all these dependent variables

female students had more favorable ratings of their instructors than male students. None of the interaction effects were significant nor approached significance.

I/D ratios of instructors and sex of the students were the two independent variables in the analysis of variance for testing the second hypothesis and the first ten items of the PRSI were the dependent variables. Figure 2 shows the number of instructors in each cell. The analyses of variance are reported in Table 2. The unit of analysis was the mean score of the male and the female students in each class. Alpha was set a .10 in these analyses.

The main effect of instructor's I/D ratio was significant for six of the dependent variables: Interest in subject, Fairness in grading, Sense of proportion and humor, Self-reliance and confidence, Personal peculiarities, and Stimulating intellectual curiosity. Presentation of subject matter also approached significance. In all these analyses instructors with high I/D ratios were rated significantly better than instructors with low I/D ratios. The main effect of sex was not significant for any of the dependent variables. None of the interaction effects was significant.

To test the third hypothesis classes were divided into high and low participation groups on the basis of the combined or total score for categories 8 and 9 (student talk) on the FIAC. The median of these two categories combined was used as the cutting point. A one tailed t test was utilized (Wiersma, 1969) to test the null hypothesis of no significant differences between the means of high and low participation classes. The mean score of classes was the unit of analysis and alpha was set at .10.

The results are reported in Table 3. Significant differences were found for the following dependent variables. Interest in subject matter, Sympathetic attitudes toward students, Fairness in grading, Liberal and progressive attitudes, Presentation of subject matter, Sense of humor and proportion, Self-reliance and confidence, Personal peculiarities, and Stimulating intellectual curiosity. In all cases high participation classes were rated higher.

Discussion

The first hypothesis stated that students who are nominated by instructors as frequent participants in classroom discussion will rate their instructors higher than those who are nominated as non-participants. The results of this study show that the ratings of participant and non-participant students do not differ significantly. Participating students did not rate their instructors higher on any of the ten dependent variables than non-participating students. Thus, the first hypothesis was not supported.

The likely explanation of these results is that instructors do not really judge well who the participants and non-participants are. This is really to questions the reliability of their nominations. In further research it would be desirable to check instructor nominations of frequent participants against direct observations of student participation.

The second hypothesis stated that instructors who are more indirect in their teaching will be rated higher than those instructors who are less indirect in their teaching style. The results of this study reveal differences in the ratings direct and indirect instructors received from their students. On six out of ten dependent variables the instructors who were indirect received significantly more favorable ratings than

instructors who were direct. These variables were Interest in subject, Fairness in grading, Sense of proportion and humor, Self-reliance and confidence, Personal peculiarities, and Stimulating intellectual curiosity. Indirect instructors provide more praise and encouragement for their students and they also provide for student participation (McKeachie, 1967); the findings of other researchers in this area (Rubinstein and Mitchell, 1970; Tuckman, 1969; Flanders, 1970; and Wilt and Edson, 1962) are in agreement with these results.

The third hypothesis stated that classes which have more frequent participation on the average, as indicated by the amount of student verbal behavior, will rate their instructors higher than those which have less frequent participation. In testing the third hypothesis participation was approached in a different manner than in the first analysis. The frequency of student-initiated talk in the classroom according to the Flanders system was used as the participation index. The results of this analysis revealed that classes which have higher participation means assign higher ratings to their instructors than classes which have lower participation means on nine out of ten dependent variables: Interest in subject, Sympathetic attitudes toward students, Fairness in grading, Liberal and progressive attitudes, Presentation of subject matter, Sense of proportion and humor, Self-reliance and confidence, Personal peculiarities, and Stimulating intellectual curiosity.

Instructors who are indirect in their teaching style are expected to elicit more frequent student participation than instructors who are direct in their teaching style. It was hypothesized that participation is reinforcing and leads to more favorable attitudes toward the course and instructor. The results of this study confirm the findings of a number of

studies of teaching styles (Rubinstein and Mitchell, 1970; Tuckman, 1969; Flanders, 1970; and Wilt and Edson, 1962) as well as studies pertinent to participation (McKeachie, 1964; McKeachie, 1971; and Thoresen, 1966).

Summary

The general hypothesis of this research is that student participation in classroom discussion is rewarding and that it reinforces favorable attitudes toward the instructor. A total of 480 undergraduates rated their instructors. Instructors identified high and low participants, and instructors were rated as high and low facilitators of discussion by expert observers. No difference between ratings of high and low participant students were found, but instructors who were rated as high facilitators by experts were also rated higher by students.

Participation

Sex of Students	H	L
M	N=47	N=33
F	N=73	N=61

Figure 1. N of students in the analysis for H:1

Instructors I/D Ratio

Sex of Students	H	L
M	N=9	N=8
F	N=9	N=9

Figure 2. No. of instructors in the analysis for H:2

Table 1

ANOVA for participation and sex of students as independent variables

Dependent variables	F-Ratios		
	Participation A	Sex B	A_xB
(1) Interest in subject.	.29	.49	.00
(2) Sympathetic attitudes toward students.	1.92	.01	.00
(3) Fairness in grading.	1.66	2.07	.44
(4) Liberal and progressive attitudes.	.41	.23	.05
(5) Presentation of subject matter.	.13	1.43	.18
(6) Sense of proportion and humor.	1.63	6.08**	.00
(7) Self-reliance and confidence.	.06	.58	.41
(8) Personal peculiarities.	2.29	.12	.04
(9) Personal appearance.	.45	8.24***	.17
(10) Stimulating intellectual curiosity.	1.45	4.15*	1.36

* P = .05; ** P = .01; *** P = .005

Table 3

T Values for Mean Differences of

High and Low Participation Classes

Dependent variable	t	significance level
Interest in subject	2.30	.025
Sympathetic attitudes toward students	1.38	.10
Fairness in grading	1.83	.05
Liberal and progressive attitudes	2.16	.025
Presentation of subject matter	2.97	.01
Sense of proportion and humor	3.06	.005
Self-reliance and confidence	1.63	.10
Personal peculiarities	1.79	.05
Personal appearance	1.02	.20
Stimulating intellectual curiosity	2.80	.01

Table 2

ANOVA for instructor's I/D ratio and sex of students as independent variables

Dependent variables	F-Ratios		
	Instructor's I/D Ratio A	Sex of Students B	A_xB
(1) Interest in subject.	5.12*	.01	1.01
(2) Sympathetic attitudes toward students.	1.60	.00	.36
(3) Fairness in grading.	4.93*	1.24	.08
(4) Liberal and progressive attitudes.	1.65	.36	.18
(5) Presentation of subject matter.	2.51	.02	1.76
(6) Sense of proportion and humor.	6.39**	.57	.44
(7) Self-reliance and confidence.	5.61*	.63	.46
(8) Personal peculiarities.	4.45*	.23	.01
(9) Personal appearance.	.52	.40	.39
(10) Stimulating intellectual.	2.85*	.34	2.57

*P .05

**P .01

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